

AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A communication system, comprising:

a first communication device; and

a second communication device,

wherein said first communication device includes:

a first content receiving unit operable to receive, via a first communication path, a Multicast frame which stores a content and has a Multicast IP address as a destination address at a Network Layer of the Multicast frame;

a conversion unit operable to convert the received Multicast frame into a Unicast frame addressed to said second communication device, the Unicast frame having only one Multicast IP address, which is the same as the Multicast IP address of the Multicast frame, as a destination address at a Network Layer of the Unicast frame, and the Unicast frame also having a Media Access Control (MAC) address of said second communication device as a destination address at a Data Link Layer of the Unicast frame; and

a first content transmission unit operable to transmit the converted Unicast frame to said second communication device via a second communication path, based on a protocol having a re-transmission processing, and

said second communication device includes:

a second content receiving unit operable to receive the Unicast frame transmitted via the second communication path from said first communication device based on the protocol having the re-transmission processing,

wherein the re-transmission processing is performed at a Media Access Control (MAC) layer that is a layer lower than a layer of a communication protocol defining the Multicast frame, the Multicast frame is an IP Multicast frame, and

said conversion unit is operable to convert the IP Multicast frame into the Unicast frame in which a Multicast IP address included in the IP Multicast frame is set as an address at a Network Layer and a MAC address of said second communication device is set as an address at a Data Link Layer.

2-4. **(Cancelled)**

5. **(Currently Amended)** The communication system according to Claim 1,
wherein said second communication device further includes a second content request unit operable to request said first communication device to distribute the content, and
said first communication device further includes a first content request receiving unit operable to receive the content request from said second communication device, and
wherein said first content receiving unit is operable to extract from the Multicast frames transmitted via the first communication path a Multicast frame which stores a content corresponding to the content request received by said first content request receiving unit, and operable to receive the extracted Multicast frame.
6. **(Previously Presented)** The communication system according to Claim 5 further comprising a plurality of said second communication devices,
wherein said first content request receiving unit is operable to receive the content requests from the plurality of said second communication devices,
said first content receiving unit is operable to extract from the Multicast frames which are transmitted via the first communication path Multicast frames corresponding to a plurality of contents corresponding to the plurality of the content requests received by said first content request receiving unit, and operable to receive the extracted Multicast frames,
said conversion unit is operable to convert the plurality of the Multicast frames which have been received by said first content receiving unit and are corresponding to the plurality of the contents into Unicast frames which are addressed to the plurality of said second communication devices which have requested the contents, and
said first content transmission unit is operable to transmit the Unicast frames which have been converted by said conversion unit to the plurality of said second communication devices.
7. **(Previously Presented)** The communication system according to Claim 6,
wherein said first communication device further includes a first content duplication unit operable to duplicate a content requested by the plurality of said second communication devices among a plurality of contents included in the Multicast frames received by said first content receiving unit, and

wherein said conversion unit is operable to convert the Multicast frames corresponding to a plurality of the identical contents which have been duplicated by said first content duplication unit into Unicast frames which are addressed to the plurality of said second communication devices which have requested the content, and

said first content transmission unit is operable to transmit the Unicast frames which have been converted by said conversion unit to the plurality of said second communication devices which have requested the content.

8. **(Original)** The communication system according to Claim 1 further comprising a third communication device which is connected to said second communication device,

wherein said second communication device further includes a second content transmission unit operable to transmit a content included in the Unicast frame received by said second content receiving unit to said third communication device, and

said third communication device is operable to receive the content transmitted from said second communication device and to provide the received content to a user.

9. **(Previously Presented)** The communication system according to Claim 8,

wherein said second content transmission unit is operable to convert the Unicast frame received by said second content receiving unit into a Multicast frame.

10. **(Currently Amended)** The communication system according to Claim 8,

wherein said second communication device further includes:

a second content request receiving unit operable to receive the content request from said third communication device;

a second content request unit operable to request said first communication device to distribute a content corresponding to the content request received by said second content request receiving unit, and

said first communication device further includes a first content request receiving unit operable to receive the content request from said second communication device, and

wherein said first content receiving unit is operable to extract from the Multicast frames which have been transmitted via the first communication path a Multicast frame which stores the

content corresponding to the content request received by said first content request receiving unit, and operable to receive the extracted Multicast frame.

11. **(Previously Presented)** The communication system according to Claim 10 further comprising a plurality of said third communication devices,

wherein said second communication device further includes a second content duplication unit operable to duplicate the content requested by the plurality of said third communication devices among a plurality of contents included in the Unicast frames received by said second content receiving unit, and

said second content transmission unit operable to transmit a plurality of identical contents which have been duplicated by said second duplication unit to the plurality of said third communication devices which have requested the contents.

12. **(Original)** The communication system according to Claim 10 further comprising a plurality of said third communication devices,

wherein said second content request unit is operable to request said first communication device to distribute the content after receiving all content requests from the plurality of said third communication devices, in a case where the contents requested by the plurality of said third communication devices are identical.

13. **(Previously Presented)** The communication system according to Claim 1.

Wherein said first content receiving unit is operable to receive a Multicast frame which stores a plurality of the contents, and

wherein said conversion unit is operable to convert the Multicast frame corresponding to the plurality of the contents received by said first content receiving unit into a Unicast frame, in order to store the plurality of the contents into the single Unicast frame.

14. **(Previously Presented)** The communication system according to Claim 1.

Wherein the first communication path is a wire, and said first content receiving unit is operable to receive, via the first communication path, the Multicast frame which stores the content, based on the protocol having the re-transmission processing.

15. **(Currently Amended)** A transmitting device which transmits a content to a receiving device, the transmitting device comprising:

a first content receiver configured to receive, via a first communication path, a Multicast frame which stores the content and has a Multicast IP address as a destination address at a Network Layer of the Multicast frame;

a converter configured to convert the received Multicast frame into a Unicast frame addressed to the receiving device, the Unicast frame having only one Multicast IP address, which is the same as the Multicast IP address of the Multicast frame, as a destination address at a Network Layer of the Unicast frame, and the Unicast frame also having a Media Access Control (MAC) address of the receiving device as a destination address at a Data Link Layer of the Unicast frame; and

a first content transmitter configured to transmit the converted Unicast frame to the receiving device via a second communication path, based on a protocol having a re-transmission processing,

wherein the re-transmission processing is performed at a Media Access Control (MAC) layer that is a layer lower than a layer of a communication protocol defining the Multicast frame, the Multicast frame is an IP Multicast frame, and

said converter is configured to convert the IP Multicast frame into the Unicast frame in which a Multicast IP address included in the IP Multicast frame is set as an address at a Network Layer and a MAC address of the receiving device is set as an address at a Data Link Layer.

16. **(Currently Amended)** A receiving device which receives a content transmitted from a transmitting device,

wherein the transmitting device includes:

a first content receiver configured to receive, via a first communication path, a Multicast frame which stores the content and has a Multicast IP address as a destination address at a Network Layer of the Multicast frame;

a first converter configured to convert the received Multicast frame into a Unicast frame addressed to the receiving device, the Unicast frame having only one Multicast IP address, which is the same as the Multicast IP address of the Multicast frame, as a destination address at a Network Layer of the Unicast frame, and the Unicast frame also having a Media Access Control

(MAC) address of the receiving device as a destination address at a Data Link Layer of the Unicast frame; and

a first content transmitter configured to transmit the converted Unicast frame to the receiving device via a second communication path, based on a protocol having a re-transmission processing, and

the receiving device comprising:

a second content receiver configured to receive the Unicast frame transmitted from the transmitting device based on the protocol having the re-transmission processing; and

a second converter configured to convert the Unicast frame received by said second content receiver to a Multicast frame,

wherein the re-transmission processing is performed at a Media Access Control (MAC) layer that is a layer lower than a layer of a communication protocol defining the Multicast frame; ~~the Multicast frame is an IP Multicast frame; and~~

~~said first converter is configured to convert the IP Multicast frame into the Unicast frame in which a Multicast IP address included in the IP Multicast frame is set as an address at a Network Layer and a MAC address of the receiving device is set as an address at a Data Link Layer.~~

17. **(Currently Amended)** A communication method for transmitting a content to a receiving device, the communication method comprising:

receiving, via a first communication path, a Multicast frame which stores a content and has a Multicast IP address as a destination address at a Network Layer of the Multicast frame;

converting the received Multicast frame into a Unicast frame addressed to the receiving device, the Unicast frame having only one Multicast IP address, which is the same as the Multicast IP address of the Multicast frame, as a destination address at a Network Layer of the Unicast frame, and the Unicast frame also having a Media Access Control (MAC) address of the receiving device as a destination address at a Data Link Layer of the Unicast frame; and

transmitting the converted Unicast frame to the receiving device via a second communication path, based on a protocol having a re-transmission processing,

wherein the re-transmission processing is performed at a Media Access Control (MAC) layer that is a layer lower than a layer of a communication protocol defining the Multicast frame;

the Multicast frame is an IP Multicast frame, and
said converting converts the IP Multicast frame into the Unicast frame in which a
Multicast IP address included in the IP Multicast frame is set as an address at a Network Layer
and a MAC address of the receiving device is set as an address at a Data Link Layer.

18. **(Currently Amended)** A content distribution system for distributing a content to a seat
in the content distribution system, the content distribution system comprising:

a first communication device and a second communication device,

wherein said first communication device includes:

a first content receiving unit operable to receive, via a first communication path, a
Multicast frame which stores a content and has a Multicast IP address as a destination address at
a Network Layer of the Multicast frame;

a conversion unit operable to convert the received Multicast frame into a Unicast frame
addressed to said second communication device, the Unicast frame having only one Multicast IP
address, which is the same as the Multicast IP address of the Multicast frame, as a destination
address at a Network Layer of the Unicast frame, and the Unicast frame also having a Media
Access Control (MAC) address of said second communication device as a destination address at
a Data Link Layer of the Unicast frame; and

a first content transmission unit operable to transmit the converted Unicast frame to said
second communication device via a second communication path, based on a protocol having a
re-transmission processing, and

said second communication device includes:

a second content receiving unit operable to receive the Unicast frame transmitted from
said first communication device via the second communication path based on the protocol
having the re-transmission processing; and

a second content transmission unit operable to transmit the content included in the
Unicast frame received by said second content receiving unit to said seat,

wherein the re-transmission processing is performed at a Media Access Control (MAC)
layer that is a layer lower than a layer of a communication protocol defining the Multicast frame;
the Multicast frame is an IP Multicast frame, and

said conversion unit is operable to convert the IP Multicast frame into the Unicast frame in which a Multicast IP address included in the IP Multicast frame is set as an address at a Network Layer and a MAC address of said second communication device is set as an address at a Data Link Layer.

19. **(Currently Amended)** A communication method which is performed by a communication system including a first communication device and a second communication device, the communication method comprising:

receiving, by the first communication device, via a first communication path, a Multicast frame which stores a content and has a Multicast IP address as a destination address at a Network Layer of the Multicast frame;

converting, by the first communication device, the received Multicast frame into a Unicast frame addressed to the second communication device, the Unicast frame having only one Multicast IP address, which is the same as the Multicast IP address of the Multicast frame, as a destination address at a Network Layer of the Unicast frame, and the Unicast frame also having a Media Access Control (MAC) address of the second communication device as a destination address at a Data Link Layer of the Unicast frame;

transmitting, by the first communication device, the converted Unicast frame to the second communication device via a second communication path, based on a protocol having a re-transmission processing; and

receiving, by the second communication device, the Unicast frame transmitted via the second communication path from the first communication device based on the protocol having the re-transmission processing,

wherein the re-transmission processing is performed at a layer lower than a layer of a communication protocol defining the Multicast frame;

the Multicast frame is an IP Multicast frame; and

said converting converts the IP Multicast frame into the Unicast frame in which a Multicast IP address included in the IP Multicast frame is set as an address at a Network Layer and a MAC address of the second communication device is set as an address at a Data Link Layer.

20. **(Currently Amended)** A communication method which is performed by a receiving device which receives a content transmitted from a transmitting device,

the transmitting device executing:

receiving, via a first communication path, a Multicast frame which stores the content and has a Multicast IP address as a destination address at a Network Layer of the Multicast frame;

converting the received Multicast frame into a Unicast frame addressed to the receiving device, the Unicast frame having only one Multicast IP address, which is the same as the Multicast IP address of the Multicast frame, as a destination address at a Network Layer of the Unicast frame, and the Unicast frame also having a Media Access Control (MAC) address of the receiving device as a destination address at a Data Link Layer of the Unicast frame; and

transmitting the converted Unicast frame to the receiving device via a second communication path, based on a protocol having a re-transmission processing,

said communication method comprising:

receiving, by the receiving device, the Unicast frame transmitted from the transmitting device based on the protocol having the re-transmission processing; and

converting, by the receiving device, the received Unicast frame to a Multicast frame,

wherein the re-transmission processing is performed at a Media Access Control (MAC) layer that is a layer lower than a layer of a communication protocol defining the Multicast frame, the Multicast frame is an IP Multicast frame, and

~~said converting of converting the received Multicast frame into a Unicast frame converts the IP Multicast frame into the Unicast frame in which a Multicast IP address included in the IP Multicast frame is set as an address at a Network Layer and a MAC address of a receiving device is set as an address at a Data Link Layer.~~

21-27. **(Cancelled)**